Department of Health and Mental Hygiene (DHMH)

Fiscal Year 2006

Information Technology Master Plan

Agency CIO:

Arthur Thacher
Acting Director
Information Resources Management Administration (IRMA)
410-767-2234
AThacher@dhmh.state.md.us

DATE: October 8, 2004

Approved by:

   Arthur Thacher
      Acting Director
      Information Resources Management Administration (IRMA)

Table of Contents

SECTION ONE – GENERAL AGENCY INFORMATION

A. DHMH VISION STATEMENT

Leading the Way to a Healthy Maryland in the New Millennium

B. DHMH MISSION STATEMENT

DHMH promotes the health of all Maryland citizens by providing health and support services; by improving the quality of health care for all; by providing leadership in the development and enactment of responsible and progressive health care policy; and by serving as the advocate for public health initiatives and programs to improve the quality of life for all Marylanders. Maryland's public health is our business.

C. BUSINESS FUNCTIONS

The Department of Health and Mental Hygiene has identified four key functions that it needs to carry out in order to fulfill its mission. These are monitoring and ensuring delivery of quality health care; assuring access to health care for Maryland citizens; promoting improvements in public health; and, coordinating health care planning and policy in the state. In addition, infrastructure in the form of a variety of support services, including information technology, provides a solid foundation that allows the Department to perform its core functions.

HEALTH CARE QUALITY

A Maryland health care delivery system that values the standards of quality of service, continuous improvement and accountability and ensures that the most appropriate services are delivered to all who need them.

> Outcome Goals:

- Improve quality of care in the regulated industry
- Improve quality of care in State financed programs
- Improve quality of care in State-operated programs and local health departments
- Ensure quality of care through licensed health care professionals

HEALTH CARE ACCESS

Availability of a comprehensive range of appropriate (community-based vs. institutionalized) health and mental health services for all Maryland citizens regardless of income, location or personal circumstance.

> Outcome Goals:

- Assure health care coverage
- Improve access to support services for individuals with disabilities
- Assure sufficient supply of providers and services
- Reduce barriers to appropriate utilization of services

PUBLIC HEALTH IMPROVEMENTS

The provision and promotion of activities that safeguard and improve the health and well-being of Marylanders and communities from illness and injury.

Outcome Goals:

- Improve children's well being
- Improve maternal well-being
- Reduce chronic disease
- Reduce infectious disease
- Reduce injury, illness and death through prevention efforts

HEALTH CARE POLICY

Consistent advocacy, guidance and direction provided by DHMH to ensure enhanced coordination, collaboration and cooperation among agencies responsible for health care planning and program development.

Outcome Goals:

- Improve the coordination of health policy development

INFRASTRUCTURE

The administrative functions necessary to support the operation of all DHMH program units. This includes budget, personnel, training, information technology and other support areas, as well as environment/space.

Outcome Goals:

- Ensure well-qualified workforce
- Ensure a physical work environment that promotes work effort
- Provide reliable access to accurate, secure and timely electronic information
- Provide internal support services and goods in an efficient, timely and customer friendly manner

In addition to the priorities and goals, the Department has established a crosscutting goal to improve internal and external customer service.

D. ORGANIZATION CHART

DHMH Organization Chart

SECTION TWO

EXECUTIVE SUMMARY – AGENCY GOALS AND KEY STRATEGIES

As the State's public health agency, the Department of Health and Mental Hygiene's core goals are to assure that Maryland citizens have access to health care services, to improve public health across the demographic spectrum, and to ensure that the health care provided is of a consistently high quality throughout the state. The responsibility for these efforts lie primarily with the Medical Assistance Program (health care access), Public Health Services (public health), and the Office of Health Care Quality and other regulatory and licensing programs (quality). However, there is significant crossover impact among the different areas. For example, access to health care services affects health outcomes.

Information technology plays an important role in the Department's efforts to achieve its goals. Among the IT functions are facilitating communication within the Department and with its many external partners; giving citizens convenient access to health information and services; and providing powerful tools for data collection and analysis.

The Department uses the Managing for Results (MFR) process to establish overall goals and objectives. Following is the FY 2006 Departmental MFR that illustrates key DHMH goals and objectives with regard to public health, health care access and health care quality.

KEY GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

	2002 Actual	2010 Goal	Expected Result
Maternal and Child Health			
Reduce infant mortality rate (per 1,000 births)	7.6	5.3	170 fewer deaths
Reduce infant mortality rate for African-Americans	12.7	8.0	110 fewer deaths
Increase women receiving prenatal care in first trimester	84%	90%	Improved birth outcomes
Reduce teen birth rate (per 1,000 population)	35.4	33.6	330 fewer teen births
Reduce number of children < 6 years of age with elevated blood lead levels (> 10 ug/dl)	2,297	230	2,067 fewer children with elevated blood lead levels
WIC enrollment	95,913	105,000 (2006)	Improved child health/nutrition
Communicable Diseases			
Reduce reported cases of vaccine-preventable communicable diseases	1,248	940 (2005)	Fewer cases of hepatitis, Lyme disease, measles, mumps, pertussis
Maintain rate of primary/secondary syphilis at less than 5.1 cases per 100,000 population	4.3	<5.1	
Maintain up-to-date immunizations of 2 year-olds	82%	80%	
Chronic Diseases			
Reduce percent of adults smoking cigarettes	15.4%	15.05% (2007)	26,000 fewer smokers

Reduce percent of underage high school students smoking cigarettes	17.6%	17.3% (2007)	
Reduce percent of underage middle school students smoking cigarettes	5.0%	4.75% (2007)	
Reduce overall cancer mortality rate (per 100,000)	202.2 (2001)	174.6	1,389 fewer deaths
Reduce breast cancer mortality rate (per 100,000)	27.3 (2001)	21.5	170 fewer deaths
Reduce colorectal cancer mortality rate (per 100,000)	21.6 (2001)	17.5	205 fewer deaths
Reduce heart disease mortality rate (per 100,000)	238.4	200.0	1,920 fewer deaths
Maryland Primary Care enrollment	7,668	8,000 (2006)	Improved health status for adults with chronic medical conditions
Average daily census in State chronic hospitals	177 (2003)	174 (2006)	Improved access to care
AIDS			
Reduce the number of new HIV cases	2,143	1,173 (2006)	
Maintain proportion of people surviving at least 1 year after AIDS diagnosis	92.9%	90% (2006)	
Labs			
Turnaround time for newborn screening tests (days)	4	3 (2006)	Prevent MR, other birth defects
Develop genetic amplification methods to detect emerging and re-emerging infections	8	20 (2006)	Early detection of viruses and bio-terrorism agents
Substance Abuse			
Reduce percentage of substance abuse patients using at discharge from treatment	14% (2003)	10% (2005)	
Increase percentage of substance abuse patients employed at completion of treatment	43% (2003)	50% (2005)	
Maintain average arrest rate at discharge at least 55% less than arrest rate at admission	64% (2003)	55% (2005)	
Clients treated for substance abuse	48,262	53,973 (2005)	Improve access to care
Mental Health			
Increase percent of adult consumers reporting that receiving mental health services has allowed them to more effectively deal with daily problems	74% (2000)	75% (2005)	500 additional consumers report improved outcomes
Increase percent of parents/caregivers reporting that their child is better able to control behavior as a result of receiving mental health services	53% (2000)	58% (2005)	1,800 additional consumers report improved outcomes
Medicaid consumers using fee-for-service system	77,833 (2003)	85,150 (2005)	Improve access to care
Uninsured consumers using fee-for-service system	12,004 (2003)	12,900 (2005)	Improve access to care
Maintain readmission rate within 30 days of discharge at State psychiatric hospitals less than 5%	3.9%	4.2%	Reduce hospitalization of chronically mentally ill
Average daily census in State psychiatric hospitals	1,415 (2003)	1,443 (2005)	Reduce use of ERs, local jails

Developmental Disabilities			
Increase number of developmentally disabled receiving community-based services	21,458 (2003)	23,433 (2005)	Increase access to services for people on waiting list
Average daily census in State residential centers	421 (2003)	366 (2006)	Reduce use of institutions
Medicaid			
Increase percent of HealthChoice respondents that reported medical care improved their health (adults)	79%	83% (2005)	
Increase percent of HealthChoice respondents that reported medical care improved their health (children)	83%	86% (2005)	
Increase percent of severely disabled children who receive at least one ambulatory care visit during year	66%	72% (2005)	
Increase percent of severely disabled adults ages 21-64 who receive at least one ambulatory care visit during year	76.9%	79.5% (2005)	
Increase proportion of elderly and disabled receiving community-based vs. long term institutional care	31.4%	39.1% (2005)	
Increase percent of HealthChoice children ages 4-20 receiving dental care	34.5%	41% (2005)	
Medicaid and MCHP enrollment	595,614 (2003)	633,700 (2005)	Improved access to care
Pharmacy enrollment (MPAP/MPDP)	47,351 (2003)	62,000 (2005)	Improved access to care
Quality Assurance/Regulatory			
Reduce number of nursing homes with high prevalence of nosocomial pressure ulcers	25%	3% (2005)	Only 7 out of 250 nursing homes have high prevalence
Increase number of nursing homes monitoring residents for dehydration	90%	95% (2005)	238 of 250 nursing homes monitor for dehydration
Reduce number of developmental disabilities licensees not surveyed annually	54%	41% (2005)	Only 67 of 162 licensed facilities not surveyed annually
Increase percent of assisted living complaint investigation case closures	81%	88% (2005)	350 of 400 complaint investigations completed
Maintain number of food firms inspected that are issued closure orders at level not exceeding 2002 actual	5	5 (2005)	Less food safety issues for 1,020 food processing firms
Maintain number of milk/dairy farms inspected that are issued closure orders at level not exceeding 2002 actual	88	88 (2005)	Less food safety issues for 710 milk/dairy farms
Maintain hospital cost/admission less than national rate - Maryland - National Average	$7,641 $8,010	$9,160 (2005) $9,451 (2005)	Continuation of Medicare waiver all-payor system, hospital access for uninsured

SECTION THREE – AGENCY IT STRATEGIC DIRECTION

A. SUMMARY OF AGENCY IT ENVIRONMENT

Name of Agency Information Technology Organization

Information Resources Management Administration (IRMA)

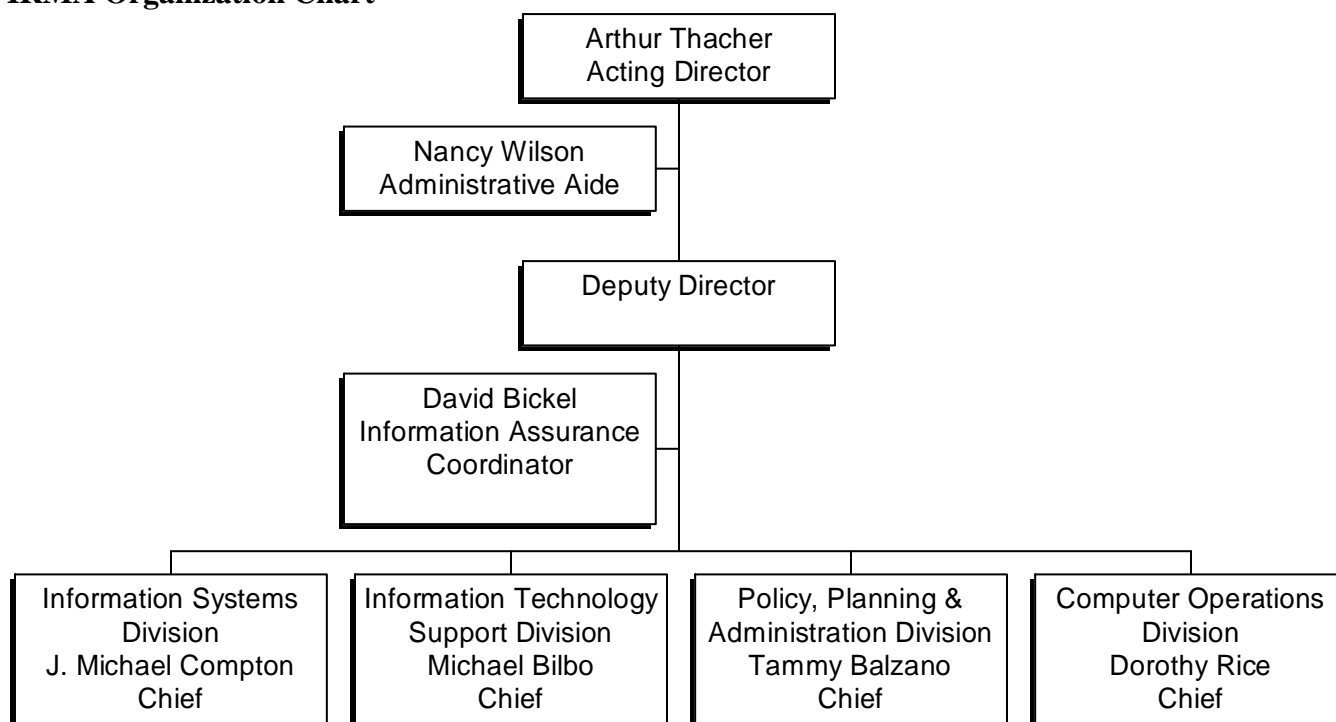### VISION/VALUES STATEMENT

Vision: Innovative technology for quality health information and services

Values: IRMA's guiding principles are communication, teamwork, career growth and performance.

MISSION STATEMENT

Mission: IRMA's mission is to coordinate, plan, develop and maintain Department-wide information resources; to provide technological support, information services and electronic communications in a prompt, secure and reliable fashion; to recommend uniform information technology policies, standards and procedures; and to assure access to accurate, timely and complete information in accordance with the DHMH Information Technology Master Plan.

IRMA Organization Chart

```
                    ┌─────────────────────┐
                    │   Arthur Thacher     │
                    │   Acting Director     │
                    └─────────────────────┘
          ┌──────────────────┐
          │  Nancy Wilson     │
          │  Administrative Aide │
          └──────────────────┘
                    ┌─────────────────────┐
                    │   Deputy Director     │
                    └─────────────────────┘
          ┌──────────────────────┐
          │  David Bickel         │
          │  Information Assurance │
          │  Coordinator          │
          └──────────────────────┘
```

Information Systems Division	Information Technology Support Division	Policy, Planning & Administration Division	Computer Operations Division
J. Michael Compton Chief	Michael Bilbo Chief	Tammy Balzano Chief	Dorothy Rice Chief

1. Background

The Information Resources Management Administration (IRMA) is responsible for implementing the guidelines set forth in the State of Maryland Information Technology Master Plan for the Department of Health and Mental Hygiene (DHMH) and operates in conjunction with the Health Information Coordinating Council (HICC). IRMA is comprised of the Director's Office and four divisions:

Director's Office

The IRMA Director's Office provides direction for DHMH information resources management. This is accomplished through (1) formulating overall DHMH information resources strategy and related policies, procedures and fiscal controls; (2) managing and coordinating the development, implementation and operations of information systems using a variety of computer platforms; (3) planning and managing the DHMH Internet and Intranet development; (4) providing support of information processing goals and objectives; direction and oversight for eGovernment initiatives; (5) providing a full range of hardware and software customer services; and (6) development and implementation of the DHMH local area network (LAN) and wide area network (WAN); and (7) information security and privacy. The Director functions as the DHMH Chief Information Officer.

Information Systems Division

The Information Systems Division consists of the following six units:

Hospital Management Information System (HMIS) is a network of eight IBM AS/400's that supports 11 Psychiatric inpatient facilities, 2 Domicile Care Units, 4 Developmental Disabilities facilities and 2 Chronic Care facilities. HMIS provides a centralized billing module and distributed ADT/Census module at each facility and an integrated Pharmacy dispensing module (six MHA sites). ORYX is a performance measurement system required by JCAHO to maintain facility accreditation. Each month data on seclusion, restraint events, patient injuries and global assessment of function (GAF) are transmitted to the central office for processing. It is then transmitted to National Association of State Mental Health Directors Research Institute (NRI).

Quality Assurance performs independent verification and validation on DHMH mainframe, midrange, and web-based systems, implements and executes change management procedures, performs security monitoring, and is responsible for developing, testing and implementing an agency-wide disaster recovery plan.

Geographical Information Systems (GIS) is used for disease tracking, bio-terrorism, tracking health indicators, mapping the locations of various types of facilities and locations of patients, other health-related geographic data and for facilitating the spatial analysis of health related data. The staff provides training on various GIS software thus saving DHMH thousands of dollars a year. The GIS unit has developed an international award winning (Best GeoMed 2003 conference paper) web based Interactive Health Application (IHA) that simplifies the use of GIS for end-users. The intuitive look and feel of IHA has promulgated its use for GIS throughout DHMH. The GIS staff maintains the DHMH spatial and client data on two Oracle database and web servers.

Database/Systems Administration maintains/administers security, databases and applications on thirty-three servers and provides analysis, design, creation, and implementation of Oracle/Microsoft databases.   The servers support systems such as: GIS and the Public Health Information Network (PHIN).   Administration includes: installing, upgrading, patching and monitoring operating systems and databases, antivirus software maintenance, network support, backups, troubleshooting hardware and software problems, and optimizing/tuning the servers. There are also three independent backup systems and a two-terabyte storage area network (SAN). For disaster recovery, an additional SAN and seven servers will be installed offsite.

Systems Maintenance provides systems analysis, design and programming support for applications on the ADC mainframe. Seventy administrative and programmatic systems and more than 4,300 batch and on-line computer programs covering accounting, human resources, vital records/health statistics and other health related program areas are maintained. A highly structured communication polling processes is maintained that allows for the transfer of data files between DHMH facilities and the Annapolis Data Center (ADC). Support is also provided for web-based applications that have been developed by ISD, other administrations, or outside vendors. Service requests come from DHMH users for various reasons to enhance or modify applications. ISD also has a major role in the coordination of the Health Insurance Portability and Accountability Act (HIPAA) implementation within DHMH.

Applications Development plans, designs, develops, integrates, and implements secure customized web based (Internet/Intranet) applications for numerous DHMH administrations. Applications are developed with the latest architectures which support distributed multi-tiered application models such as J2EE and .NET. An example is the CDC initiated Public Health Information Network (PHIN) applications that are expected to support over 2000 users statewide.

Information Technology Support Division

The Information Technology Support Division provides comprehensive Information Technology (IT) customer services to all DHMH units. Responsibilities include IT Project Planning, network systems analysis, local and wide area network implementation and support, data communications support, Internet and Intranet access, software, hardware, and equipment purchasing and allocation, technical support of installed hardware/software, PC/printer repairs, virus repairs and equipment transfer/moves. ITSD is also responsible for security on the DHMH enterprise network. Technical support to remote headquarters, facilities, and to local health departments is limited to Internet, Intranet and wide area routed frame relay communications and consultation.

The Department of Health and Mental Hygiene Information Coordinating Council (HICC) has developed a plan for infrastructure enhancements for all programs within DHMH and to provide the programs with access to the DHMH network; and to maintain the network.

The ITSD provides information technology support to the Public Health Directory, National Electronics Disease Surveillance System, HIPAA, and eGovernment initiatives.

Policy, Planning and Administration Division

The Policy, Planning and Administration Division is responsible for fulfillment of a variety of administrative functions including: IRMA information technology procurements, Internet and Intranet services; distance learning activities; information technology training, and information

technology strategic planning and policy development. The Division is responsible for the DHMH Information Technology Master Plan and for Information Technology Project Requests.

The IT Training, Distance Learning and Special Projects branch is tasked with the responsibility of providing information technology training to the employees of the Department, as well as distance learning technology and data eradication services to DHMH units throughout the State.

The Division also is responsible for IRMA's fiscal management, personnel transactions, records management, physical inventory, Managing for Results requirements, telecommunications requests and special projects.

Computer Operations Division

The Computer Operations Division provides a variety of support services to all DHMH units. These services include: Electronic billing, Production Control, Laser/Impact Printing, Data Entry, Hospital Management Information System, and Audio/Video, Satellite Support Services.

Support services such as Report Distribution, Billing Transmission, Data Entry, HMIS Help Desk, and Audio/Video, Satellite support is delivered in an efficient, timely and customer friendly manner. The Computer Operations Division is currently operating a Xerox 4635 and a Xerox Docuprint 96 Laser Printer 24 hours a day, 5 days a week for the Department's printing requirements. These printers provide simplex and duplex print volume averaging 2.5 million impressions per month.

Health Information Coordinating Council

The purpose of the Health Information Coordinating Council (HICC) is to serve as a permanent, senior-level, decision-making and implementation body for carrying out the Department's information resources management responsibilities. As a department-wide partnership of all stakeholders, the HICC provides recommendations on essential components of information resources management programs and policies to the Director of the Department's Information Resources Management Administration.

The executive leadership of the DHMH, through the Maryland Health Information Coordinating Council will ensure that the Department's investments in information resources are managed efficiently in support of the DHMH mission. In this, the HICC acts under the Secretary's charter of responsibility to make recommendations for information technology planning, budgeting, contracting, information resources management policies and standards, and access to and appropriate use of public health data.

The HICC represents all DHMH organizations and local health department partners through senior memberships. The HICC accomplishes its mission through workgroups which include non-members, on an ad-hoc or standing basis. The workgroups focus on broad or technical areas and produce plans, reports, recommendations, guidelines, and policies. HICC workgroups have included the following areas:

- Security and Confidentiality
- Strategic Planning
- Communication and Learning
- Hospital Management Information Systems
- Geographic Information Systems
- Health Insurance Portability and Accountability Act (HIPAA)
- Electronic Forms

The Executive Board of the HICC is comprised of the Secretary, Deputy Secretaries, select senior executive staff, and the co-chairs of the HICC. Recommendations and unresolved issues are presented to the Executive Board for review, comment and guidance.

The HICC provides the Department with an appropriate forum to conduct discussions, review and endorse policies, increase awareness and support for information resources management issues, and receive recommendations from senior managers regarding critical technology issues facing the Department, the State, local partners and the public at large.

Effective information resources management (IRM) is essential to achieving the DHMH mission to fulfill public health goals and serve the citizens of Maryland. Emphasis is placed on critical Department-wide issues that support projects and services delivered at the program level. Strategic IRM directions focus activities that will successfully achieve IRM goals and position the Department for the future.

DHMH's success in its mission requires ready access to data, both by the Department's staff and by others. Having sound information policies and practices, and efficient, responsive information systems is a key priority of DHMH's senior management team. The Department is committed to gathering and analyzing the data needed to evaluate health risks and trends, measure health program results, and educate individuals throughout the State, make policy decisions, and implement interventions to effect change. DHMH is also committed to promoting and supporting innovative technical solutions to health information problems. A sound IRM program is critical to the Department's ability to provide objective, reliable, and understandable information for these purposes.

DHMH, in order to optimize the limited resources available, promotes the sharing of best practices among its units, as well as, information about emerging innovative technologies. The Department structures horizontal committees and teams that utilize resources from all units. This will result in joint ventures which benefit all participants and the State of Maryland.

The implementation of new or updated technologies include training and end-use support, an evaluation of the project, transition costs or benefits. These elements are collected and compared to the original benefits of the business process investigation to present to the administration for future planning and management.

2. Drivers and Issues

The two most significant drivers of information technology in the Department of Health and Mental Hygiene are the Health Insurance Portability and Accountability Act (HIPAA), and emergency preparedness primarily driven by bio-terrorism.

HIPAA

The HIPAA rules are categorized into three areas, each with a separate implementation date:

Privacy of personal health information
Electronic transactions and code sets
Security of personal health information

Although the privacy rules will have a direct bearing on the security aspects of HIPAA, they do not have a significant emphasis on information technology. However, the electronic transactions and codes sets have a major impact on all medical information systems with a particular effect on claims processing. Within DHMH, the Medicaid process has had the greatest impact due to the enormity of the system and the numbers of health providers involved in the claims process. Other systems such as the Hospital Management Information System, Breast and Cervical Cancer, Kidney Program, Children's Health Program, and AIDS Program are working to replace and/or augment existing claims processing systems.

The third area of concern is in personal health information security. This is the area where information technology is impacted. All electronic transmissions and stored data must be protected using methodologies such as data encryption, third party authentication, systems security and disaster recovery processes.

Emergency Preparedness

Response to public health emergencies is a growing concern. The emphasis on bio-terrorism by the Department of Health and Human Services (HHS) and other Federal agencies has resulted in new policies regarding the responsibilities of public health agencies, more cooperative efforts between federal, state, and local health agencies, and the need for standardized and integrated health information systems.

The Centers for Disease Control and Prevention (CDC) is working with all of the states to establish a national Public Health Directory using the Lightweight Data Access Protocol (LDAP). This directory will contain the identity of all health and medical personnel in the country along with their respective roles in health and medical emergencies, and methods for contacting each person. The directory will provide a standardized method for state and local public health agencies to maintain their specific directories while allowing for sharing the directory information with the CDC.

The CDC has developed a National Electronic Disease Surveillance System that will be used by all states for the reporting of infectious diseases. The system will be deployed in phases beginning with a core reporting capability and adding new modules over time. The system will provide standardized reporting capability for all federal, state, and local public health organizations.

In addition to the two information technology initiatives mentioned above, the Centers for Disease Control has provided direction to states in the area of improved communications and data security. The areas of communications include technologies such as cell phones, pagers, satellite broadcasts, video teleconferencing, and increased use of the Internet and electronic mail.

The CDC has placed emphasis on the need for robust, reliable, and secure data networks. Their direction mirrors the HIPAA direction regarding the need for increased security of data.

The Department of Health and Human Services (HHS) which oversees both the HIPAA and CDC emergency preparedness initiatives, has ensured that the guidance from both initiatives has

a common theme regarding data security.   Some examples include the need for Continuity of Operations, disaster recovery, data encryption, third party authentication, physical security, personnel security, and national standards.

3. IT Goals and Strategies

As mentioned above, the goals for HIPAA include the implementation of the security improvements. The original cost estimate for meeting these goals was in excess of one million dollars, which cannot be obtained via the General Fund due to statewide budget reductions. However, the requirements established by the CDC for increased physical, personnel, and data security as it relates to emergency preparedness has included sufficient funding to not only meet the CDC requirements but to also satisfy many of the HIPAA requirements since they are basically the same.

Some of the steps necessary to meet these requirements have already been taken. Over the past two years the Department of Health and Mental Hygiene has

> constructed a centralized secure data center with redundant communications switching systems;

> connected to the state-wide data network (NetworkMD) which provides redundancy for Internet access and email services;

> established preliminary data encryption procedures;

> assessed network security;

> assessed department-wide disaster recovery procedures; and

> identified alternate locations for business continuity.

Additional steps for improving overall security include:

> the implementation of improved personnel security policies;

> establishment of an alternate data center site for disaster recovery;

> improvements in methodologies for single sign-on and data encryption;

> development of a redundancy for assuring the 24/7 operations for selected critical systems such as the Public Health Directory and the National Electronic Disease Surveillance System.

Managing For Results

Goal 1   **Health Insurance Portability and Accountability Act (HIPAA)** – Lead DHMH efforts for compliance with the Health Insurance Portability and Accountability Act (HIPAA).

Objective 1.1 To achieve 100% compliance with the development and implementation of project plans for each of the HIPAA Rules according to the mandated compliance dates.

Strategy   Facilitate technical, logistical and operational support for HIPAA compliance within DHMH.

Performance Measure 1.1.a   Facilitation of department-wide HIPAA workgroups in undertaking and completing tasks according to the established project plan.

Outcome Measures	FY 2003	FY 2004	FY 2005	FY 2006
Privacy and Security Policies adopted as mandated	2	3	5	5
% of DHMH employees trained	80	100	100	100
% Privacy and Security contract templates adopted and implemented	100	100	100	100
% of identified systems with capacity to accept standard transactions	50	100	100	100
% of identified systems that employ code sets	50	100	100	100
% of identified systems that employ identifiers	50	100	100	100
% of identified functions utilizing Security standards	0	50	100	100

Goal 2   **Public Health Information Network (PHIN)** – In compliance with PHIN standards developed by CDC, fully implement the *National Electronic Disease Surveillance System (NEDSS)* and the Maryland *Public Health Directory* to enhance Department's ability to rapidly detect and respond to public health threats, including bioterrorism.

Objective 2.1   By June 30, 2006, all local health departments, hospital-based infection control practitioners and selected diagnostic laboratories will be reporting disease morbidity, laboratory results and other public health event data to NEDSS securely over the Internet. Additionally, NEDSS will be the

primary system used by DHMH to monitor disease trends and manage outbreaks in Maryland.

Strategy   Continue to receive grant funding from and partner with the CDC in the NEDSS Base System. Implement condition-specific NEDSS Program Area Modules as they become available.

Strategy   Seek funding for additional technology and staff to ensure that NEDSS is secure, available and accessible 24 hours a day, 7 days a week.

Performance Measure 2.2.a   Number of NEDSS users.

Output Measure	FY 2003	FY 2004	FY 2005	FY 2006
Users	0	0	250	350

Outcome Measures	FY 2003	FY 2004	FY 2005	FY 2006
Events reported (cases, lab results)	0	0	10,000	30,000
Investigations Managed in NEDSS	0	0	3,000	10,000

Objective 2.2   By June 30, 2006, public health professionals, State-certified professional volunteers and public health's partners in emergency response will be trained and actively using the Maryland Public Health Directory to update their personal contact information and receive alerts, updates and advisories about significant public health events.

Strategy   Partner with the DHMH Training Services Division to develop and implement a training program for the members of the Public Health Directory.

Strategy   Continue to receive grant funding from and partner with the CDC in the implementation of the secure Health Alert Network web portal and the Maryland Public Health Directory.

Strategy   Seek funding for additional technology and staff to ensure that the Public Health Directory is secure, available and accessible 24 hours a day, 7 days a week.

Performance Measure 2.2.a   Number of Public Health Directory Users

Output Measure	FY 2003	FY 2004	FY 2005	FY 2006
Trained PH Directory Users	0	0	400	450

Outcome Measure				
Number of successful alerts	0	0	50	200

4. IT Accomplishments

Information System Division (ISD)

Web (INTERNET/INTRANET/EXTRANET) & Client-Server Development

Public Health Information Network (PHIN) - National Electronic Disease Surveillance System (NEDSS): NEDSS is a CDC initiative attempting to standardize disease surveillance. The NEDSS Base System (NBS) will track all communicable diseases, STD's, and bioterrorism outbreaks. The CDC has provided the system architecture, security, software and hardware standards for setup the NBS and has given the states the related documentation to assist in building the NBS. NBS uses the J2EE architecture that is a multi-tiered and distributed server approach which facilitates system scalability and flexibility. The NBS will allow federal, state, and local governments as well as hospitals and labs to coordinate from a central system by providing both horizontal and vertical communications via data entry, analysis and reporting, electronic lab reporting and PHIN messaging services. In DHMH's efforts to comply with CDC standards, we have designed and are in the process of building a secure system that is both flexible and scalable. This system sits behind its own set of firewalls on its own subnet. Also communication can only be made through a proxy web server using 128-bit SSL encryption. Also, the NBS has redundancy built into it, guaranteeing 24/7 availability through Primary, Secondary, and offsite Disaster recovery systems. In addition, we have purchased a Storage Area Network (SAN). The SAN will also have redundancy built into it so there will be no single point of failure there by ensuring availability of the NBS data. This is achieved by redundant ports on the hard dives, dual CPU's, dual caches, dual switches, dual fiber optical HBA server cards, and local and remote mirroring.

Currently, our primary, secondary systems, and SAN have been purchased. We have installed all the hardware and operating systems. Both NBS Oracle databases (NEDSS and Reporting database) have been installed and created. We are in the process of installing the NBS application server software. The application will consist of three-server service. They are BEA Weblogic application server, SUN's iPlanet LDAP server, and SAS. We are moving to the next step which will be the installation and configuration of the PHIN Messaging servers.

Public Health Information Network (PHIN) - Public Health Directory: The purpose of the public health directory is to enhance the communication abilities of public health agencies in Maryland by facilitating access to accurate contact information. The Public Health Directory is being developed and deployed as a Lightweight Directory Access Protocol (LDAP) Directory in Oracle Internet Directory. (LDAP is an open standard client-server protocol for accessing online directory services over the TCP/IP network protocol and providing a way for Internet clients, applications, and Web servers to access directory listings of Internet users.) The directory will be accessible via the Health Alert Network Portal. Currently, in the process of deploying the Health Alert Network Portal on an Oracle Portal Server platform.

Office of Food Protection and Community Health Services (OFPCHS): The Food Protection Project consists of designing and implementing a new database and user interface system for OFPCHS located at two separate locations, in Baltimore and Hagerstown. The OFPCHS is responsible for licensing and permitting over 3200 facilities and individuals annually. The project team will be developing the database in Oracle and will be using Active Server Pages (ASP) for the development of the front-end Graphical User Interface (GUI). The information gathering and analysis phases of the project have been completed. Information from the Food Control, Milk Control, Community Services and Permits & Licensing divisions has been gathered and analyzed in order to assess the business processes and functional requirements. The Functional Requirements Document has also been completed encompassing the business and user needs for the new system. The workflow for the system has been completed, and the data flow depicting the data movement through the database is currently in process of being completed. Use cases have also been developed based upon the user actions that will be required for the new system. The server in which the database will reside has been received and has been installed, setup and configured. The tape backup for the database server has also been installed and configured. The project team currently has nearly completed the entire complex database design for the project, consisting of three separate segments. The next actions that will be performed entail creating the database, designing and developing the user front-end, implementing these systems and performing testing. The new system will benefit and be used by between 75-100 users once completed.

Maryland State Boards and Commissions: The first of a multi-phase system development project for the Boards and Commissions was to move the twenty-year-old COBOL-based application off of the mainframe at the Annapolis Data Center and into a multi-tier web-based intranet environment while maintaining the existing mainframe functionalities.
The new web-based application system is being developed in Active Service Page (ASP) programming syntax along with other programming utility tools such as Dreamweaver MX, JavaScript, and VBscript. The system connects to a Microsoft SQL Server 2000 database. For more elaborate printing features, Business Objects Crystal Reports was used.
The Board of Physical Therapy is the first of the twelve Boards undergoing the "system conversion". The project started at the end of 2003 and it is being developed according the Maryland Department of Budget and Management's (DBM) System Development Life Cycle (SDLC); the project is now in the "Testing" phase.

The following Boards will be converted from the COBOL-based systems to a multi-tier web-based intranet environment: Social Work, Audiology/Hearing Aid Dispensers/Speech-Language Pathologists, Psychologist, Professional Counselors and Therapists, Chiropractic/Massage Therapy Program, Morticians, Optometry, Acupuncture, Podiatry & Kidney, Nursing Home Administrators and Dietetic Practice.

Document Library: This document library will be included as part of the Health Alert Network (HAN). Users of the HAN will be able to search, post, retrieve, and share important documents and files via the Internet using this system.

Legislative Tracking System: The Office of Governmental Affairs (OGA) tracks all health-related legislation/bills that are introduced during the 90-day session of the Maryland General Assembly and coordinates the DHMH response as necessary. The Legislative Tracking System allows for the tracking and monitoring of over 800 bills and fiscal notes as well as tracking all pertinent information about the legislation. This system is deployed on the Internet, allowing users to track bills from any location in real time as the legislation progresses.

Each day during the session, OGA downloads the data from Annapolis. OGA then imports this data into the system's database. The new data is immediately available. OGA can add their own information to each bill as well as assign it to the various liaisons for review. Legislative liaisons for each administration each have their own interfaces, allowing them to track bills that are of special interest while filtering out those bills for which there are no concern.

A series of reports based on the information imported and entered into the system is available to OGA staff and all liaisons. Each report is dynamically generated at the time of request, available on the Internet, and can be printed out for distribution or meetings.

Data Systems Inventory: This system provides a set of online forms where staff throughout the DHMH can add the data systems that they manage.   The staff members can manage their own list, making additions, edits, and deletions as needed. There is also a set of reports that can give an accurate and up to date overview of all the systems. The Data Systems Inventory provides a central location to store and track information about the vast number of data management applications used by DHMH.

Internet Multi-Media: We have begun to distribute information employing recent advances in streaming media technology. This media can be streamed over the Internet to users on demand, or distributed on CD. The content includes audio, video, animations of computer screen actions, and even PowerPoint presentations directly synchronized with the other media elements. Overall, this method will greatly improve the dissemination of complex information throughout the organization, the state, and ultimately, the public.

Conference Registration: To facilitate registrations to the upcoming Public Health Technology Conference, as well as future events, we developed a registration application and deployed it on the Internet. Here, attendees can obtain information about the various seminars being offered. Once they decide to attend, they can immediately register and choose their own itinerary from a schedule of seminars. Upon registering, the system provides the user with a confirmation page including their itinerary. The confirmation page suggests that they print this page and bring it on the day of the conference.
The registrations are collected in a central database. An administration module allows conference staff to view the registrants and keep aware of the number of registrants for each seminar. This will help the staff to better plan the room size and plan any possible cancellations of seminars for low attendance prior to the event. Also included in the administration module is the ability to lookup registrants by name, department, or seminar. This will enable the event staff to print a copy of the registrant's itinerary should they forget to bring it to the conference.

Project Tracking System: As part of the new DHMH Intranet, we have created a system to track projects through the development cycle. This system is intended to replace the current method of project reporting via static web pages. The new method of tracking will provide a clear and direct channel for project leaders to report on their progress. It will give managers a fast and accurate view of a complete set of information about projects. It will also show a history of the project, so managers will be able to track a project's progress over time.
The interface and functions are similar to those of Microsoft Project. However, by developing this system on the Intranet, users interact with it via a Web browser thus eliminating the need to purchase expensive client licenses for each staff member.

Hardware: To coincide with the new computer room being put in place in DHMH, ISD has implemented a full-scale application development and hosting environment. This environment consists of redundant application and database servers, backup units, and streaming media servers. The server architecture is designed to significantly increase the capacity to develop and host the applications listed above, as well as many future application projects.

Communications - BlastFax: System implemented March 2004. Web-based emergency notification system for faxing information and alerts to health care responders.

Communications - Forum Conference Bridge: System implemented 2003. A telephone conferencing system that allows State health officials to interact remotely, avoiding the use of more costly conferencing methods or travel.

Maryland eGovernment Initiative: Intranet and client-server system developed to show each department's progress in accomplishing the Maryland eGovernment Initiative. This involved accessing a database of eGovernment progress data, computing and reporting the statistics, and producing graphical statistics.

Volunteer Services Administration: Client-server system to track volunteer services and contributions, such as time donated or monies / property given. This information is kept for each volunteer office, on a monthly basis.

Office of the Attorney General (OAG): Client-server system to track Dentist board discipline cases and statuses. Reporting capabilities also incorporated.

Office of the Attorney General (OAG): Client-server system to track OAG attorney case information and statuses, and reporting capabilities. This system encompasses all cases within the DHMH OAG.

Office for Genetics and Children with Special Health Care Needs (Family Health Administration): Client-server system to collect, compile, analyze, and distribute data on birth defects. This system includes reporting capabilities to Federal agencies and letter generation to parents of children with special needs.

IRMA Monthly Status Reporting: Intranet system to reflect the status of each ongoing project. Statuses are converted to an Internet page format, and placed within a menu system for easy access.

IRMA – Data Entry: Repaired and solved major hardware and software crash on Data Entry mid-level computer system, where contracted service company had no experience repairing. Ported applications from Unix mini-computer system to Novell based Client-server platform.

Maryland Primary Care (Family Health Administration): System implemented November 1999. This is a web-enabled extranet system used to provide basis health care services to those individuals between the ages of 16 and 64 that are not entitled to other health care and do not have private insurance. It is an Oracle-based system, consisting of an Oracle 8i database server and an Application server with an Oracle Forms and Reports front-end. The system is currently being supported by ISD, tasks including database administration, troubleshooting and enhancements as and when needed.

Contract Tracking System for Office of Contract Policy, Management & Procurement (OCPMP): Implemented July 2003. This is a web-based system used to track basic information on contracts and modification to those contracts. Training for about 25 staff members.

Customer Satisfaction Survey, Performance Excellence Coordinator: Implemented April 2003. This is a web-based (Intranet) system used as a pilot for future web-based surveys. The survey gathered information on how users of DHMH services view the quality of services provided to them.

Unified Grants Award: Implemented May 2003. Developed Excel worksheet to link to other worksheets totaling the budget amounts. Also helped develop the process to allow these worksheets to be saved and transmitted to ADC in a format that allows this information to be entered into FMIS. Also created Rumba (a terminal emulator program) templates to allow uploading of data to ADC with minimal effort.

Childhood Blood Registry: Implemented August 2003 in association with the Maryland Department of the Environment. This is a web-based (Intranet) system used by Local Health Departments to search for children's records for required blood lead testing. The historical database is operational and we are in the process of adding additional years of data.

CIGARETTE RESTITUTION FUND PROGRAM (CRFP)

Core Funding: Client-server system that tracks grant health funding for the Local Health departments.

Minority Outreach Technical Assistance: Client-server system designed to track the performance of Grantees through monthly and yearly reports. A checklist is included for report inventory purposes.

Completed the **Data Source Directory** developed in AS400-ASCII file format to list all the sources where the Cigarette Restitution related data could be obtained for the Director of The Cigarette Restitution Fund Program (CRFP). Then at the request of the Director changed it to Excel/Word format.

Completed **Fiscal Reporting System** in Excel format to list all the Cigarette Restitution funding distribution for an office director in the Community Health Administration.

Completed a CRFP **"Contracts in Process"** system in Excel format to list all the contracts distribution for the Chief of Contracting Office.

Completed **Procurement System** in Excel format to list all the procurement distributions for an office director in Community Health Administration and Contracting Office.

Revised the **Stoplight program** in Excel format to detect all projects' status (Green - completed, Amber - alert and Red - late) for the network/web development office in Community Health Administration to apply the program into MYSQL.

Completed the **Cancer Data Source** in Excel/Word format to list all the sources where the data could be obtained for an office director in Community Health Administration.

Completed the 3-matrix in Excel format to list the status of the projects for the Director of the Cigarette Restitution Fund Program.

Completed the first 35-page "prototype" of the **CRFP Comprehensive Evaluation** Report in Excel/Word format to list all the activities/projects/contracts status for the director of the Cigarette Restitution Fund Program.

Completed the **CRFP Data Source Cross-reference program** in Excel/Word format to cross-reference all the Cigarette Restitution data sources where the data could be obtained for the Director of the Cigarette Restitution Fund Program.

Completed the first 40-page "prototype" **CRFP Cancer Comprehensive Evaluation Report** in Excel/Word format to list all the cancer activities/programs status for the Director of the Cigarette Restitution Fund Program.

Completed the **CRFP Document Tracking System** with a 69-page user's and system documentation in Word format to track all the in-and-out documents for the Director of the Cigarette Restitution Fund Program.

Completed a 33-page draft version of the "prototype" **Comprehensive Evaluation on Minority Outreach Technical Assistance** (MOTA) report in Excel/Word format to list all the activities/programs status for the Director of the Cigarette Restitution Fund Program.

Completed a 17-page "prototype" **Comprehensive Evaluation report on Tobacco** in Excel/Word format to list all the activities/programs status for the Director of the Cigarette Restitution Fund Program.

Completed an **Executive Tracking System** in Microsoft Access format to list all the programs (Tobacco MOTA, Cancer, Contracts and Procurements) status for the Director of the Cigarette Restitution Fund Program.

Completed the **CRFP Local Public Health Components** (Cessation, Community, Enforcement, Minority and School Based) in Microsoft Access format to list all the activities/programs related to Tobacco for an office director in Community Health Administration.

Completed the **"Quarterly Status Report Form"** report in Excel format to keep track of all projects status in a quarterly basis for the Project Management Office.

Modified the **Health Care Foundation System** in Microsoft Access to list all the activities/programs for one of the office director in Community Health Administration.

Developed a **CRFP Requested Reports and Deliverable System** in Microsoft Access format to list all the activities/programs/contracts for the Director of the Cigarette Restitution Fund Program.

MISCELLANEOUS

Modified the **Sexual Assault System** in Microsoft Access format to keep track of all the rape victims in Maryland for an office director in Community Health Administration.

Completed the **Maryland Business License Information (BLIS)** project in Excel/Microsoft Access to locate where the information could be found from the proper State Agencies for the Governor's office per DHMH CIO's request.

Completed the assessment on the **OCPMP Training Database System** in Excel format to list all the training modules and who had taken what classes etc. and recommended the user from the Contracting Office to develop it in Microsoft Access format.

Modified the **Office of the Inspector General Hotline System** in Microsoft Access to record all complaints from any person/agency and then created a prototype Intranet/Web based system.

DATABASE/SYSTEMS ADMINISTRATION

- Designed, created, and implemented databases across several platforms such as Oracle and Microsoft SQL server.
- Maintained and administered the databases and several applications on the servers.
- Administer and manage a grand total of thirty-three servers onsite as well as seven servers offsite for disaster recovery.
- These servers are currently in use for projects relating to: Geographic Information Systems (GIS), National Electronic Disease Surveillance System (NEDSS), Public Health Directory (PHDIR), Food Protection and the DHMH Intranet.
- These servers host enterprise-wide applications and databases.
- The entirety of the GIS databases, Web pages and applications are stored and monitored in ISD.
- The entire application and database systems for the PHDIR as well as NEDSS are stored in ISD as required by the Centers for Disease Control (CDC) regulations.
- The INDHMH Intranet Web pages are hosted, administered and maintained on an ISD server.
- Installed various operating systems and database applications, installed software updates/patches, performed upgrades, provided network support, and performed system backups.
- Resolved server hardware and software problems as well as optimized and tuned servers for optimal performance.
- Maintained three independent backup systems as well as a 2-terabyte-storage area network (SAN) upgradeable to 17.5 terabytes.
- An additional SAN will also be placed at the offsite location for disaster recovery.

HMIS – Hospital Management Information System (ISD)

Successfully completed a sole source contract with Creative Socio Medics Inc. (CSM) to provide DHMH with a HIPAA compliant translator for all electronic bills sent by the Division of Reimbursements (DOR) to Medicare and Medicaid. All three HIPAA translator functions have been successfully tested and both Medicare A and Medicare B billing modules are fully operational. Medicaid billing has passed all tests and waiting for Medicaid to go live with 837 processing. It is important to note that upon completion, this sole source

contract allowed DHMH to 'cost avoid' fees of over $600,000.00 dollars in HIPAA translator proposals obtained through the TORFP process.

Completed move of AS/400 CPU from Crownsville hospital site (closed as of 6/30/2004) to the C. T. Perkins site. All patient transfers completed successfully and daily ADT and billing functions are running smoothly.

Completed hardware upgrade at Spring Grove hospital center with positive results in reduced throughput times at peak workload periods. Will install, in next several months, the old Spring Grove AS/400 that is TCP enabled, at RICA Rockville to resolve connectivity issues.

Successfully completed TORFP ($271,136.00) with PEC Solutions Inc. for an external evaluation and assessment of HMIS security systems and how they address HIPAA requirements. Final milestone has been delivered and contract ended on August 31, 2004.

Continued maintenance on a reporting function at Spring Grove Hospital Center that centralizes 'real time' bed availability for all State operated psychiatric inpatient centers.

Developed and implemented an electronic version of the Monthly Statistical Report for all State operated inpatient facilities. Although hard copy is still produced and mailed to select individuals, the bulk of the hardcopy mailing list will be replaced with electronic copies. Savings over the long run will be significant and the timeliness of the report, following the billing cycle, will be dramatic (hardcopy = 60 to 80 days, electronic copy = 3 days).

Successfully continued revenue generation (approximately $63 million per year) from the HMIS billing module following sole source contract with AIMS Inc. to migrate to AS/400 environment (hardware and software) for Year 2000 compliance. New system has been operational from 1999 through 2004. No outside RPG support has been required as of this time to meet ADT and billing module requirements.

Successfully developed, implemented and maintained software module for JCAHO mandated ORYX performance measurement system beginning in 1999 and continuing through the present. During this period, new performance indicators have been developed and added as required by JCAHO.

Replaced manual patient day reporting functions at Mental Hygiene Administration with electronic reports derived directly for the HMIS Census module. These reports are sent to Budget Management Office (BMO) on a monthly and yearly basis.

Automated monthly electronic file creation for the Social Security Administration (SSA) to track all forensic cases admitted to State operated psychiatric facilities who would have received a jail sentence of one year or more.

Quality Assurance Team (ISD)

Implemented security monitoring and change control procedures for the Hospital Management Information System (HMIS). This was done to adhere to auditors' requirements for separation of duties, documented authorization of system changes, and limited and documented access to production data. Security monitoring procedures were implemented in October, 2001. Change control procedures were implemented in May, 2000.

Created processes and schedules for backing up, and for storage at an offsite location, all ISD supported mainframe files that were identified as critical files. The Annapolis Data Center (ADC) contracted with a vendor to provide offsite storage services. In the event that a major disaster occur at the ADC and it becomes necessary to process jobs at an alternate site, all files stored offsite will be transported by the vendor to the ADC hotsite facility. This project was initiated in December, 2002 and will remain open until after hotsite testing occurs, which is scheduled for November, 2003.

Performed quality assurance functions on IT systems developed by vendors contracted by various Administrations within the State. These services were first offered in August, 2000 and continue to be available upon request.

Implemented security monitoring procedures to identify and verify authorization of changes made to DHMH ADC mainframe user ids and security data rules. These procedures were implemented in May, 2003.

Established monitoring procedures to assure that jobs that backup critical DHMH non-Medicaid data for offsite storage at the Iron Mountain facility are processed successfully on a daily basis. This process was implemented in January, 2004.

Successfully coordinated the restoration of DHMH non-Medicaid critical data from tapes stored offsite at the Iron Mountain facility onto the ADC hotsite for use in testing critical IT applications. Hotsite testing was performed in November, 2003 and June, 2004.

Information Technology Support Divisions (ITSD)

Redesigned the architecture of the DHMH Enterprise Wide Area Network

Established co-locations with networkMaryland in the Salisbury, Hagerstown, and Washington LATA's; we now have a physical network presence with nwMD in these locations

Converted all DHMH sites in the Salisbury LATA to connect to DHMH WAN using nwMD Layer 2 services

Converted all DHMH sites in the Hagerstown LATA to connect to DHMH WAN using nwMD Layer 2 services

Converted some DHMH sites in the Washington LATA to connect to DHMH WAN using nwMD Layer 2 services

Established SwGi connectivity for entire DHMH Enterprise network

Designed and implemented a private Local Area Network for use by National Electronics Disease Surveillance System

Upgraded enterprise servers to NetWare 6.5

Upgraded enterprise GroupWise system to GroupWise 6.5

Performed upgrade to GroupWise 6.5 for multiple remote DHMH sites

Procured, coordinated, and provided oversight for 41 network cable installation projects

Technicians responded to 7096 HelpDesk tickets; an 18% increase in tickets over prior year

Facilitated the migration of all DHMH HQ Administrations' servers and equipment into the DHMH DataCenter

Designed and installed network infrastructure equipment to facilitate Video Conferencing across the WAN

Installed additional firewalls, an intrusion detection system, virus scanners, and SPAM filters to further protect DHMH network from external and internal threats

Upgraded infrastructure equipment in the 300 Building to enable full Gigabit Ethernet backbone connectivity to that building

Data Eradication

The data eradication project was initiated in May, 1999 to ensure that data was eradicated from excessed equipment. After initially using data eradication software, in 2001 the decision was made to have hard drives shredded by a contractual vendor. IRMA updated the Data Eradication Guidelines and requested and received approval from the Health Information Coordinating Council (HICC).

We have expanded our efforts to include the destruction of other media: magnetic tapes, magnetic tape cartridges, floppy disks, CD-ROMS, fax machine cartridges and copy machine cartridges. We have extended our services statewide to include 86 DHMH Business Units and we conduct an annual survey to measure the current demand for our services. We also offer a monthly Information Session/Training Class on data eradication.

Data Eradication Services are important to DHMH because they protect the department from the liability associated with the risk of improper handling of public health data. The extent of

this liability is now more widely recognized with the implementation of the HIPPA regulations and with the new emphasis on Homeland Security.

DHMH Data Eradication Procedures

5. Electronic Government Initiative

Prior to the passage of legislation requiring State agencies to provide information to the public using both static and dynamic web pages on the Internet, the Department of Health and Mental Hygiene had already undertaken numerous initiatives for this purpose. Every major organization in the Department including licensing boards and commissions, hospital facilities, county health departments, and program offices have web pages. DHMH programs providing services directly to the public, such as the HealthChoice program, Maryland Children's Health Program, Pharmacy program, and Division of Vital Records have significant amounts of information available online, including application guidance and forms. In addition, since l997 every major application system has been developed using Internet technologies.

As the department identifies legacy systems, particularly mainframe-based applications, for replacement, they are developed for operation using Internet based technologies. In support of this direction, the department has invested heavily in training for incumbent information technology staff, extensively expanded the capacity and capability of networking technology, constructed a central highly secure data center, employed security technologies such as VPN, and issued numerous policies and guidelines regarding the protection of highly sensitive data.

By fiscal year 2005, all of the licensing systems for professional health care workers (physicians, dentists, nurses, etc.) will have been moved from the mainframe to client/server technology. In fiscal year 2005 these systems will be upgraded to provide the capability for license renewals over the Internet.

By fiscal year 2005 the department will be implementing an Internet based application system for the reporting of infectious diseases. This application will be fully compatible with the National Electronic Disease Surveillance Systems (NEDSS) implemented by the Center for Disease Control (HHS), and be accessible by all County Health Offices.

A national public health director system will be implemented with each State implementing it's own version of this system which will be based upon the lightweight data access protocol (LDAP) and be Internet accessible. The directory will identify all public health participants, including primary clinical personnel, their roles, and contact information covering all jurisdictions.

Numerous small application systems will be deployed over the next few years, as funding becomes available. Most of the applications will be developed using in-house staff and most will be below reportable thresholds.

B. FUTURE AGENCY IT ENVIRONMENT

The Department of Health and Mental Hygiene is continuing the process of developing a highly secure, reliable network that is accessible by all organizations in the department. Two major federal initiatives, HIPAA and bio-terrorism, have begun in recent years. There is significant overlap in some areas of these initiatives such as data security and standardized data reporting. A major aspect of the bio-terrorism initiative is the mandatory use of the Internet.

Activity has been underway for the past few years to expand our capacity for communications, use of the Internet, security of highly sensitive data, and development of new information systems that are compatible with similar national systems. Three of the major goals in these federal initiatives are:

   a) To rapidly detect a terrorist event through a highly functioning, mandatory reportable disease surveillance system, as evidenced by ongoing timely and complete reporting by providers and laboratories in a jurisdiction, especially of illnesses and conditions possibly resulting from bio-terrorism, other infectious disease outbreaks, and other public health threats and emergencies.

   b) To ensure effective communications connectivity among public health departments, healthcare organizations, law enforcement organizations, public officials, and others as evidenced by: 1) continuous high speed connectivity to the Internet; 2) routine use of e-mail for notification of alerts and other critical communications; and 3) a directory of public health participants (including primary clinical personnel), their roles, and contact information covering all jurisdictions.

   c) Secure electronic exchange of clinical, laboratory, environmental, insurance and billing claims, and other public health information in standard formats between the computer systems of public health partners.

The department has over 120 locations throughout the State where public health organizations and staff are housed. Each of these locations is connected to the department via Network Maryland's statewide network. Effective security of systems and data requires that each system have reliable disaster recovery plans. Alternate sites must be available in order to recover systems in the event of a major disaster. The department will have developed plans for backup site for all critical systems by 2005, preferably in cooperation with other state agencies.

SECTION FOUR - AGENCY INFORMATION TECHNOLOGY INVESTMENT PORTFOLIO

A. IT PROJECT SUMMARIES

1. Alcohol & Drug Abuse Administration (eSAMIS)
2. Laboratories Administration – Automation of Laboratory Testing Database
       and Reporting
3. Medicaid – Acquisition of EDI Software for MMIS
4. Medicaid – Electronic Funds Transfer for Pharmacy Electronic Reimbursements
5. Medicaid – Point of Sale – Electronic Claims Management Network
6. WIC on the Web (WOW)
7. DDA PCIS2
8. Boards & Commissions

1) ADAA (eSAMIS)

Section	Title	Description
1.	Project Title	Electronic Substance Abuse Management System (eSAMIS)
2.	Major Project Y/N	Yes
3.	Project Description	The Alcohol and Drug Abuse Administration (ADAA) has developed and implemented an electronic web-enabled data management system to assess treatment program performance and provide individual programs with the ability to utilize their clinic data to make service delivery improvements. This system expands upon the data elements collected by the ADAA Substance Abuse Management Information System (SAMIS). SAMIS contains information on all client admissions to and discharges from the State certified programs in Maryland.

The enhanced system utilizes and improves upon the technology and infrastructure of the HIDTA Automated Tracking System (HATS) client-server software operated by the University of Maryland Bureau of Government Research (BGR) currently being used in some jurisdictions as a data collection and communication tool between treatment programs and criminal justice agencies. The new system allows the ADAA, working with BGR and the University of Maryland Center for Substance Abuse Research (CESAR), to continuously monitor and analyze what kinds of treatment services are most successful for specific client populations so that the services can be replicated statewide. The new system will also ensure that programs are collecting vital data that can be used to improve program practices. With increasing demands for accountability for ADAA's substance abuse treatment resource allocation, the agency must develop a defensible performance measurement system that takes advantage of some of the most advanced information technology. |
| 4. | Project Management | Lucinda Shupe, Division Director of Information Services
Jeffrey Allison, Project Manager |
| 5. | Project Status | The project has been successfully completed and is currently in production. |
| 6. | Project Estimated Cost | Total costs all years FY 03 – FY 09: $6,050,000 |

7.	Major Milestones	Bureau of Governmental Research (BGR) Major Milestones FY04 to FY05
		FY2004
		• Provide eSAMIS system maintenance, continued installation and training as treatment programs transition to e-reporting
		• Continue education and training of remaining certified treatment programs to report on new eSAMIS system
		• Implement and monitor mechanisms for ongoing data transfer between BGR, ADAA, and CESAR
		• Analyze, Design, Develop and Test eSAMIS software enhancements
		FY2005
		Provide e-SAMIS system maintenance, continued installation and training for treatment programs using e-SAMIS reporting system
		Provide education and training of newly certified treatment programs and new staff in existing programs to report on e-SAMIS system
		Modify and enhance mechanisms for ongoing data transfer between BGR, ADAA, and CESAR
		Center for Substance Abuse Research CESAR FY 03 Activities
		Monitoring Client Outcomes
		Method 1: Administrative Data Linking
		Analyze data
		Produce preliminary report on employment outcomes
		Produce preliminary report on arrest outcomes
		Present results to Advisory Committee
		Primary Data Collection
		Write draft protocol, then circulate for review and write final protocol.
		Sample 300 clients from 30 pilot programs
		Meet with providers to discuss logistics
		Begin data collection
		Analyze data
		Follow-up assessment package and produce final report
8.	Managing For Results (MFR)	MFR not reported
9.	List of Other Projects Impacted by this Project	• None
10.	List of System Interfaces	•

2) LABORATORIES ADMINISTRATION (Automation of Laboratories Testing Database and Reporting)

Section	Title	Description
1.	Project Title	Automation of Laboratory Testing Database and Reporting
2.	Major Project Y/N	No
3.	Project Description	This project will computerize all laboratories using the LITS Plus system developed by CDC. It is Windows-based and runs on a SQL Server 2000 platform on a LAN. The project also includes the infrastructure upgrades needed for the system.
4.	Project Management	Mr. Brian K. Stallsmith, CNA
5.	Project Status	The project is in the Development phase.
6.	Project Estimated Cost	See Details Below
7.	Major Milestones	Infrastructure upgrade: FY 2004 LITS Plus software acquisition: FY 2004 Pilot module implementation: FY 2005 Complete implementation: FY 2008
8.	Managing For Results (MFR)	Supports MFR Goal 2.2.3 by improving turnaround time by rapid electronic reporting of test results via automated faxing.
9.	List of Other Projects Impacted by this Project	• The Laboratory Relational Database System (LRDS) being replaced by LITS Plus.
10.	List of System Interfaces	• LITS Plus will interface with NEDSS for transmission of Public Health data to other Federal, State, and Local agencies.

6. (Detail)

Development/Enhancement	Prior to FY2004	FY 2004 Actual	FY 2005 Approp.	FY 2006 Bud Req	FY2007 Projected	FY2008 Projected	FY 2009 Projected	FY2010 Projected	Total
Services									
General Funds									
Special Funds									
Federal Funds									
Sub Total									**0**
Development/Enhancement									
Infrastructure									
General Funds									
Special Funds		293,224	205,000	84,000	84,000	84,000	84,000	84,000	918,224
Federal Funds	87,609								87,609
Sub Total	**87,609**	293,224	**205,000**						**1,005,833**
Dev/Enh Total	87,609	293,224	205,000						1,005,833
Operations/Maintenance									
General Funds									
Special Funds									
Federal Funds									
O&M Total									
Grand Total	87,609	**293,224**	**205,000**	**84,000**	**84,000**	**84,000**	**84,000**	**84,000**	**1,005,833**

3) MEDICAID (Acquisition of EDI Software for MMIS)

Section	Title	Description
1.	Project Title	Acquisition of EDI Software for MMIS
2.	Major Project Y/N	Yes – New Development
3.	Project Description	The Office of Operations and Eligibility develops and maintains the MMIS system to ensure prompt and accurate payment to providers of health care services. It maintains files of approved providers of services and Maryland residents certified as eligible to receive services through the Medicaid Program. This Project entails bringing the MMIS system into Health Insurance Portability and Accountability Act (HIPAA) compliance. This involves the selection and procurement of the Electronic Data Interface Translator, monitoring the installation and tailoring of the base translator software, modification of the MMIS to interface with the EDI Translator, evaluation of the existing infrastructure to support the addition of the EDI translator to the MMIS, and critical review of performance in the initial start-up period.
		The purpose of the Project is to accomplish HIPAA Transaction compliance. The scope of the effort and its impact are wide-ranging. All business processes and systems are affected. The Health Insurance Portability and Accountability Act (HIPAA), Public Law 104-191, was signed on August 21, 1996. In addition to the subject referenced in its title, the Act set forth an objective for Administrative Simplification. "It is the purpose of this subtitle to improve the Medicare program under Title XVIII of the Social Security Act, the Medicaid program under Title XIX of such Act, and the efficiency and effectiveness of the health care system, by encouraging the development of a health information system through the establishment of standards and requirements for the electronic transmission of certain health information." HIPAA regulations have adopted standards for electronic transactions and standards for code sets.
		The expected outcome at project completion is HIPAA compliance to the final rules on Standards for Electronic Transactions in order for the Medical Care Program to meet its obligations to both its customers and taxpayers by providing quality services in a most effective and timely manner. Therefore, this project significantly modifies, both, MMIS' infrastructure and applications.

4.	Project Management	Mr. John Bohns, Division Chief, Division of Management Information Systems. Office of Operations and Eligibility, MCP
5.	Project Status	This is a New Systems Development Project which, when completed, should improve the efficiency of claim payment at significantly lower cost. This multi-year project establishes a timeline for the transition of every major health transaction in the Medicaid Program to a standard form. Transactions are being designed, developed, tested and deployed on a prioritized transaction by transaction basis. The three 837 transactions (programs) have been loaded into EDIFECS Commerce Desk for Trader Partner testing. An 835 test transaction will be placed on Commerce Desk for the Trade Partners to download and test with. The Companion Guides have also been loaded. Forty-two Trading Partners have signed on for testing through Commerce Desk and nine are actively testing. Communications Handler is being implemented. Front end Portal web based application for EDITPS has been designed, developed and tested. The Connect: Direct process from MMIS to EDITPS has been configured and tested.
6.	Project Estimated Cost	See below.
7.	Major Milestones	See chart below.
8.	Managing For Results (MFR)	See below
9.	List of Other Projects Impacted by this Project	• **Internal Agency Projects –** At the present time, there are several on-going HIPAA Projects at DHMH. • **Other MD Agency Projects –** HIPAA is a nationwide implementation, encompassing both the private and public sector. Any Agency that deals directly with a health care provider may be affected. • **Other Federal, County, Municipal or Private Projects –** The HIPAA Initiative of the Federal government is a nationwide implementation and it is considered by health care economists and other analysts as one of the most significant changes in the practice of health care in many decades; one that will directly impact Maryland providers, patients and insurers in both the private and public sectors.
10.	List of System Interfaces	Multiple health care providers.

6. Project Estimated Costs (Detail)

Development/Enhancement	Prior to FY2004	FY 2004 Actual	FY 2005 Approp.	FY 2006 Bud Req	FY2007 Projected	FY2008 Projected	FY 2009 Projected	FY2010 Projected	Total
Services									
General Funds	$62,745	0	0	0	0	0	0	0	$62,745
Special Funds	$163,926	$160,335	$25,000	$24,540	$24,981	$24,981	$24,981	$24,981	$473,725
Federal Funds	$639,591	$480,888	$74,551	$73,617	$73,177	$73,177	$73,177	$73,177	$1,561,355
Sub Total	**$866,262**	**$641,223**	**$99,551**	**$98,157**	**$98,158**	**$981,580**	**$981,580**	**$981,580**	**$2,097,825**
Development/Enhancement Infrastructure									
General Funds	0	0	0	0	0	0	0	0	0
Special Funds	$88,468	$86,530	$37,500	$36,809	$37,472	$37,472	$37,472	$37,472	$399,195
Federal Funds	$248,798	$259,527	$111,825	$110,428	$109,765	$109,765	$109,765	$109,765	$1,169,638
Sub Total	**$337,266**	**$346,057**	**$149,325**	**$147,237**	**$147,237**	**$147,237**	**$147,237**	**$147,237**	**$1,568,833**
Dev/Enh Total	**$1,203,528**	**$987,280**	**$248,876**	**$245,394**	**$245,395**	**$245,395**	**$245,395**	**$245,395**	**$3,666,658**
Operations/Maintenance									
General Funds	0	0	0	0	0	0	0	0	0
Special Funds	$7806	$7635	$187,500	$184,046	$187,359	$187,359	$187,359	$187,359	$1,136,423
Federal Funds	$21,953	$22,889	$559,125	$552,140	$548,826	$548,826	$548,826	$548,826	$3,351,411
O&M Total	**$29,759**	**$30,524**	**$746,625**	**$736,186**	**$736,185**	**$736,185**	**$736,185**	**$736,185**	**$4,487,834**
Grand Total	**$1,233,287**	**$1,017,804**	**$995,501**	**$981,580**	**$981,580**	**$981,580**	**$981,580**	**$981,580**	**$8,154,492**

7. Major Milestones

Phase	Major Milestones	Planned Start Date	Actual Start Date	Planned End Date	Actual End Date
Initiation/ Concept	**Milestone 1**- SE Vendor Orientation EDI Translator Software Purchase Order Update Project Plan On-Site Vendor Requirements	7/01/02	6/19/02	7/25/02	7/26/02
Planning/ Req. Analysis	**Milestone 2** - EDI Translator Software Provider Orientation Project Plan Update	7/08/02	8/01/02	8/29/02	8/21/02
Design / Development / Integration / Test	**Milestone 3** - EDI Translator Software Tailoring to MMIS EDI Translator Installation Training, Testing and Implementation Plans **Milestone 4** – MMIS Training **Milestone 5** – Related Architectural Needs **Milestone 6** – Test Environment Installation, Testing and Implementation	8/02/02 8/2/02 10/7/02 7/15/02 1/15/03 2/17/03	8/14/02 8/2/02 10/7/02 7/15/02 1/15/03 2/17/03	9/1/03 10/11/02 9/1/03 10/16/03 10/16/03 10/16/03	10/11/02
Implementation	**Milestone 7** Production Environment Installation, Testing and Implementation	2/3/03	2/3/03	10/16/03	
Operations / Maintenance	**Milestone 8** - Monitoring of Initial Operations	10/16/03		On-going System.	

[Requirements note – provide capability to enter as many as 5 milestones under each phase.]

8. MFR

MQ.01 Medical Care Programs Administrations – FY 2005 MFR

Goal 3 – Maximize the effectiveness of operations of the Medical Care Programs

Objective 3.2 – For FY 2005, even during the HIPAA implementation, at a minimum, DHMH will pay at least 90% of all clean fee for service claims within 30 days of receipt.

Critical Success Factors (CSF): Provide a summary of the performance measures that will be used to measure the success of this project.

Performance Measures:	2002 Actual	2003 Actual	2004 Estimated	2005 Estimated	2006 Estimated
Quality: Number of Clean Claims Processed	28,730,080	31,402,935	*30,500,000	*30,500,00	*30,500,000
Percent Processed in Less Than 30 Days	95%	97%	**90%	**90%	**90%

* Reduction in claims processed is due to a change in the administrative process which is anticipated to reduce the number submitted.

** Reduction in claims processed within 30 days is due to HIPAA implementation which initially will negatively impact efficiency until all stakeholders' systems are in place and fully functioning.

4) MEDICAID (Electronic Funds Transfer)

Section	Title	Description
1.	Project Title	Electronic Funds Transfer for Pharmacy Electronic Reimbursements
2.	Major Project Y/N	No
3.	Project Description	Medicaid payments to interested pharmacies will be made electronically instead of by paper checks. This Project will enable the Medicaid Program to meet its obligation to the pharmacy providers of the Maryland Medical Assistance Program by providing a more efficient methodology for reimbursement to pharmacies required by HB 208 and SB 376. The EFT will reflect savings that will be achieved by switching from checks to EFT payment to pharmacies.
4.	Project Management	
5.	Project Status	In the Planning Phase - A Current Services Budget Request has been submitted for FY 2005.
6.	Project Estimated Cost	See - 6. Detail section, below:
7.	Major Milestones	None
8.	Managing For Results (MFR)	**Goal 3** - Maximize the efficiency and cost effectiveness of the Medical Care Program A reduction in cost from $0.39 to $0.06 to remit Medicaid payments to pharmacies would support.
9.	List of Other Projects Impacted by this Project	• MMIS, HIPAA, Pharmacy FX System
10.	List of System Interfaces	• MMIS, HIPAA, Pharmacy FX System

6. (Detail)

Development/Enhancement	Prior to FY2004	FY 2004 Actual	FY 2005Approp.	FY 2006 Bud Req	FY2007 Projected	FY2008 Projected	FY 2009 Projected	FY2010 Projected	Total
Services									
General Funds			138,346						138,346
Special Funds									
Federal Funds			393,755						393,755
Sub Total			**$ 532,101**						**$ 532,101**
Development/Enhancement Infrastructure									
General Funds									
Special Funds									
Federal Funds									
Sub Total									
Dev/Enh Total									
Operations/Maintenance									
General Funds				2,469	2,469	2,493	2,518	2,543	10,023
Special Funds									
Federal Funds				7,026	7,026	7,097	7,168	7,240	28,531
O&M Total				**$9,495**	**$ 9,495**	**$ 9,590**	**$ 9,686**	**$ 9,783**	**$ 48,049**

Grand Total			$ 532,101	$9,495	$ 9,495	$ 9,590	$ 9,686	$ 9,783	$580,150

5) MEDICAID (Point of Sale – Electronic Claims Management Network)

Section	Title	Description
1.	Project Title	Point of Sale – Electronic Claims Management Network
2.	Major Project Y/N	No
3.	Project Description	The Program issued a Request for Proposal (RFP) to initiate the procurement process to secure a Point-of-Sale contractor commencing January 1999. As a result, the RFP included comprehensive pharmacy service needs of HealthChoice, the Specialty Mental Health System, the remaining fee-for-service system, mandatory MBE requirements, system enhancements, Coordinated PRO-DUR, in addition to the continued management of the Federal and State Rebate Programs. In addition, the prospective vendor was also requested to incorporate the stand-alone Kidney Disease Program's pharmacy processing operations and management of the Rebate Program. The Kidney Disease Programs component is budgeted separately in their operating budget. Due to the National Health Insurance Portability and Accountability Act (HIPAA), the vendor is now required to modify the existing pharmacy claim adjudication system in order to be HIPAA compliant. HIPAA necessitates that all pharmacy claims be identified by a universal code called the National Council for Prescription Drug Programs (NCPDP) transaction standard. The vendor will need to develop a new system called First SX. The development of this new system will include the conversion of the current POS system to First SX, conversion of one year of claims history, provider training, conversion to NCPDP and conversion of current coverage plans to the First SX system.
4.	Project Management	James Demery
5.	Project Status	Due to the National Health Insurance Portability and Accountability Act (HIPAA), the POS First SX IT Project (conversion/HIPPA compliance) was completed in FY 2003. The POS' vendor successfully completed the required enhancements to the existing pharmacy claim adjudication system in order to be HIPAA compliant. The Operations & Maintenance returned to normal operation in FY 2004.
6.	Project Estimated Cost	See below.
7.	Major Milestones	The POS FX – IT Project was completed in FY 2003. The Operations & Maintenance returned to normal operation in FY 2004.

8.	Managing For Results (MFR)	MQ.01 Medical Care Programs Administrations – FY 2005 MFR.
		Goal 3 - Maximize the effectiveness of operations of the Medical Care Programs
		Objective 3.2 - For FY 2005, even during the HIPAA implementation, at a minimum, DHMH will pay, at least, 90% of all clean fee-for service claims within 30 days of receipt.
		Critical Success Factors (CSF): *Provide a summary of the performance measures that will be used to measure the success of this project*
		Performance Measures: (See below)
9.	List of Other Projects Impacted by this Project	• **Internal Agency Projects –** At the present time, there are several on-going HIPAA Projects at DHMH. • **Other MD Agency Projects –** HIPAA is a nationwide implementation, encompassing both the private and public sector. Any Agency that deals directly with a health care provider may be affected. • **Other Federal, County, Municipal or Private Projects –** MCO/Managed Care Org. Pharmacies/Providers in the State of Maryland.
10.	List of System Interfaces	MMIS, HIPAA, Pharmacy FX System

6. (Detail)

Development/ Enhancement	Prior to FY2004	FY 2004 Actual	FY 2005 Approp.	FY 2006 Bud Req	FY2007 Projected	FY2008 Projected	FY 2009 Projected	FY2010 Projected	Total
Services									
General Funds									
Special Funds									
Federal Funds									
Sub Total									
Operations/ Maintenance									
General Funds	$627,979	$726,194	$698,287	$487,753	$487,753	$487,753	$487,753	$487,753	$4,491,225
Special Funds									
Federal Funds	$1,787,324	$2,066,860	$1,987,432	$1,388,221	$1,388,221	$1,388,221	$1,388,221	$1,388,221	$12,782,721
O&M Total	$2,415,303	$2,793,054	$2,685,719	$1,875,974	$1,875,974	$1,875,974	$1,875,974	$1,875,974	$17,273,946
Grand Total	$2,415,303	$2,793,054	$2,685,719	$1,875,974	$1,875,974	$1,875,974	$1,875,974	$1,875,974	$17,273,946

8. MFR Perfomance Measures

Performance Measures:	2002 Actual	2003 Actual	2004 Estimated	2005 Estimated
Quality: Number of Clean Claims Processed	28,730,080	30,500,000	26,000,000	26,000,000
Percent Processed In Less Than 30 Days	95%	97%	90%	90%

6) WIC on the Web (WOW)

Section	Title	Description
1.	Project Title	WIC on the Web (WOW)
2.	Major Project Y/N	Yes
3.	Project Description	stem supports the goals and objectives described in the Advanced Planning Document (APD) approved by the USDA. WOW will support WIC Program operations, providing nutrition benefits to over 109,000 Maryland women, infants and children each month.
4.	Project Management	Deborah Morgan, Project Manager
5.	Project Status	The project is in the Development and Testing phase.
6.	Project Estimated Cost	$5,663,336
7.	Major Milestones	Develop Clinic module – 7/22/04 (complete) Develop State modules – 2/11/05 (estimated) Implement Clinic module – 9/28/04 (estimated) Implement State modules – 4/15/05 (estimated)
8.	Managing For Results (MFR)	
9.	List of Other Projects Impacted by this Project	N/A
10.	List of System Interfaces	N/A

6. (Detail)

Development/Enhancement	Prior to FY2004	FY 2004 Actual	FY 2005 Approp.	FY 2006 Bud Req	FY2007 Projected	FY2008 Projected	FY 2009 Projected	FY2010 Projected	Total
Services									
General Funds									
Special Funds									
Federal Funds		755,341	1,419,214	622,776	685,053	705,604	726,773	748,575	5,663,336
Total		755,341	1,419,214	622,776	685,053	705,604	726,773	748,575	5,663,336

7) DDA PCIS2

Sc	Title	Description
1.	Project Title	DHMH-DDA PCIS2 Reengineering
2.	Major Project	Yes
3.	Project Description	The remediation of the overall system architecture and individual priority modules of consumer, attendance, payments and MMIS interface (federal billing) has been accomplished. The remaining modules of budget, provider, rates, reports, contracts, and administration are being remediated. Twelve-month maintenance and support periods are also in effect.
4.	Project Management	Wan-Ling Chu, Project Manager
5.	Project Status	Reengineering project estimated at an overall completion of 75% MMIS Interface began in March of 2004 DDA Provider Payments began in June 2004 Priority module remediation completed in August 2004 Remaining module remediation and maintenance and support initiated in August 2004.
6.	Project Est. Cost	$ 4,749,775 (total of development, enhancements, analysis and reengineering)
7.	Major Milestones	Phase I Priority Modules Phase III Remaining Modules
8.	Managing For Results (MFR)	PCIS2 supports DDA's goal of increasing federal fund attainment. PCIS2 captures data and assists in measuring the progress that DDA makes towards MRF goals.
9.	Other Impacts	No other projects are impacted by PCIS2.
10.	System Interface	MMIS

6. (Detail)

| Development/Enhancement Services	Prior to FY2003	FY 2003 Actual	FY 2004 Approp.	FY 2005 Bud Req	FY2006 Projected	FY2007 Projected	FY 2008 Projected	FY2009 Projected	Total
General Funds			240,000	240,000					
Special Funds									
Federal Funds			60,000	60,000					
Total	2,346,3028	25,000 231,762	300,000	300,000	155,730 151,320				3,626,841

8) BOARDS & COMMISSIONS

1. Agency: Health Occupation Boards & Commission

2. Budget Appropriation Code: M00A0104

3. Mission Statement: The common overall mission of the Health Occupations Boards is to protect the citizens of Maryland and promote quality care among the various health professions. The Boards accomplish this responsibility through the licensing, regulation and monitoring of health care professionals as mandated under the Health Occupations Article of the Annotated Code of Maryland.

4. Summary of Business Function: The Health Occupation Boards & Commission are responsible for licensing various health occupation professions, renewing licensing, receiving and investigating complaints, issuing sanctions and follow up on orders.

5. Organizational Chart:
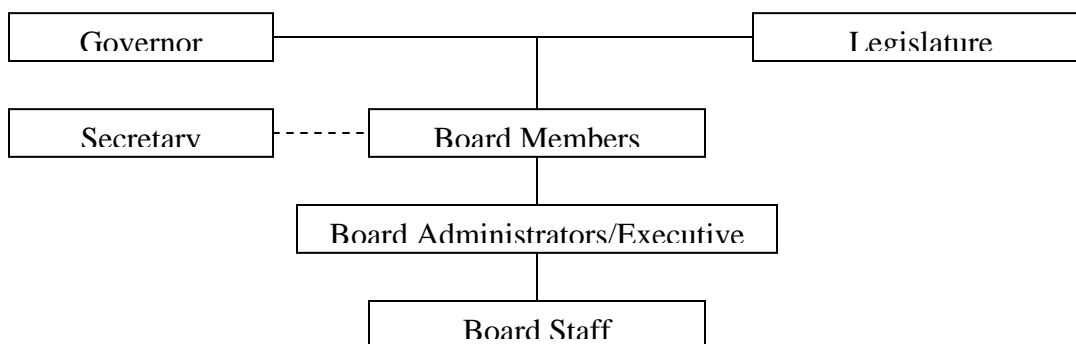
6. Information Technology Resources:
A. Organizational Chart of Information Technology (IT) Staff
B. IT Staff by name, title, classification and function (please note if less than full time)

Name	Title	Classification	Function
Henry Harle	Network Specialist	Computer Net Spec II	Provides support for 12 Boards and 1 Commission

    Board of Acupuncture
    Board of Audiology/Hearing Aid Dispensers, Speech-Language Pathologists
    Board of Chiropractic Examiners
    Board of Dietetic Practice
    Board of Morticians
    Board of Nursing Home Administrators
    Board of Optometry
    Board of Physical Therapy Examiners
    Board of Podiatry
    Board of Professional Counselors and Therapists
    Board of Psychology
    Board of Social Workers

Commission on Kidney Disease

C. Principle hardware and software applications: Pentium class PCs, MS Office, Rumba Mainframe terminal emulator

7. **On-line services:** Several Boards currently have informational web pages. These Boards include:
Board of Acupuncture
Board of Audiology/Hearing Aid Dispensers, Speech Language Pathologist
Board of Chiropractic Examiners
Board of Dietetic Practice
Board of Morticians
Board of Nursing Home Administrators
Board of Optometry
Board of Physical Therapy
Board of Professional Counselors and Therapist
Board of Social Work Examiners

No customer interactivity is currently available on the web sites. However, there are plans in the future to implement online license renewal and verification of licensure.

8. **Project Management:** This section is to be completed for each individual; project, including software, infrastructure and enhancement projects.

A. Project Title: Web Sites for the Boards

B. Project description: In an effort to become more web aware and increase web exposure for the Boards and Commission, an effort is underway to create and maintain web sites for all of the smaller licensing Boards. For most Boards (approx. 77%), this has already been completed and for some web sites are being prepared.

C. Project Team: Henry Harle, Board Administrators/Executive Directors and the Department's IRMA staff

D. Implementation strategy: The time frame for development is to have all the smaller Boards' websites created by the end of fiscal year 2004, after which time the Boards web sites will be updated and improved indefinitely.

E. Description of Requirements for Funding: No additional hardware will be required initially since the web sites will be physically housed on the State's web server. However, as the Boards' web sites expand and improve, additional hardware, software, and staff may be required to maintain and improve web development.

F. Project status: Currently 77 percent of the smaller Boards have web sites for informational purposes only.

G. Other Projects Impacted: None

H. Risk Management: Web security will be a considerable risk to privacy of data.
It is always possible to hack into the existing web server, alter information, and
Repost inaccurate data.

I. Linkage to Maryland's ITMP: All Boards plan to have web sites by July 2004.

J Linkage to Managing for Results:
1. Goals / Objectives: All the Boards plan to have web sites by July 2004.
2. Performance Measures / Indicators: 70 percent of all information and services
available by July 2004.
3. Strategies: After completing research on the costs and development of a web
site that can provide information and service to the public, implement the web
site by December 1, 2004.

Electronic License Renewal

A: Project Title: Electronic License Renewal

B. Project Description: In accordance with Maryland Electronic Government
Initiative, the licensing Boards shown in number 6 of this document, will provide
web enabled electronic processes, including, but not limited to, electronic
licensing renewal.

C. Project Team: Henry Harle, Board Administrators / Executive Directors

D. Implementation Strategy: Determine appropriate software, if any. Purchase and
install software. Convert any existing databases to the new application or import
data into the new application. Process should be complete by year 2005.

E. Description of Requirements for funding: Additional staff will be required to
maintain electronic licensing database and web functions.

F. Project Status: The Boards are presently working with IRMA staff to convert existing
databases from the mainframe to a Boards maintained and operated local server. This is
seen as Phase One in the plan to provide electronic licensing renewals.

G. Other Projects Impacted: None

H. Risk Management: Web security will be a considerable risk to privacy of data.
It is always possible to hack into the existing web server, or web database and alter
the information.

Authenticity will also be a factor. The Boards have to, in some way, verify that the
Individual filling out the electronic license renewal form, is really the person

authorized to complete this transaction.

Funding may also be a considerable hindrance to implementing this web technology. The Boards are all special funded entities which generate their own income at the expense of their licensees.

I. Linkage to Maryland's ITMP: All Boards plan to have Electronic License Renewal sites by (date to be announced).

J. Linkage to Managing for Results:
   1. Goals / Objectives: Have all Boards databases converted by Jan. 2005
   2. Performance Measures / indicators: not available at this time
   3. Strategies: Convert all Boards databases and proceed with future phases of the electronic licensing system.

B. IT PERSONNEL

As of July 28, 2004 the Department of Health and Mental Hygiene had 245.7 positions in information technology classifications at headquarters units and facilities. There were an additional 41 IT positions at local health departments.

An up-to-date listing of DHMH positions in information technology classifications may be obtained by contacting the DHMH Office of Human Resources at 410-767-5661 or HERRC@dhmh.state.md.us.

C. IT INFRASTRUCTURE

1. Transport

The Department moves information via telecommunication lines, including Local Area Network (LAN), Wide Area Network (WAN), video conferencing, audio conferencing, and satellite downlink.

The DHMH telecommunications infrastructure is comprised of Local Area Networks (LAN) at each of the facilities and a Wide Area Network (WAN) that provides data access to the DHMH Headquarters. The LANs are used primarily to support daily administrative functions and to provide user access to DHMH applications. The DHMH LAN includes routers, switches, servers, mid-range computers, firewalls and gateways to provide access to the Annapolis Data Center mainframe. The DHMH Headquarters LAN is the hub for most users and facilities. The DHMH headquarters LAN includes full site redundancy and employs multiple firewalls and SPAM filters and IDS to protect the robustness and integrity of the network.

2. Wide Area Network (WAN)

The WAN provides access to financial data, health related applications, the Internet, Intranet, and email via DHMH Headquarters. DHMH mostly employs a Client-Server Environment, using the Oracle Database and Microsoft SQL and the Microsoft Office Professional Suite as standards. The Administration has implemented a private Statewide frame-relay Wide Area Network. The WAN, with a T3 frame-relay at its core, connects the county Health Departments, State Hospital Centers, DDA Regional Offices, as well as the remote headquarters buildings to the O'Conor building, ADC, DHR, and the Internet. The WAN is protected from the Internet by two PIX firewalls. The WAN was constructed based on the Statewide Policies described in the State of Maryland Information Technology Master Plan.

3. Audioconferencing/Videoconferencing/Satellite

The DHMH distance learning systems are used in a variety of situations including training, communication and virtual meetings in multiple locations. It can also be utilized to coordinate responses, promote informed decision making and support the allocation of critical resources in the event of a public health emergency.

Public Health Distance Learning at DHMH is primarily focused in four priority areas of creating Dynamic and interactive opportunities for both improved communication and learning.

Audio Conferencing is actively used for numerous administrative and work situations that have allowed many Public Health professionals the opportunity to avoid traveling to the central office in order to attend regularly scheduled meetings. The department has purchased and installed an audio bridge that can accommodate up to 48 callers on multiple calls at one time. The DHMH conference bridge will allow department personnel to hold conference calls with costs substantially lower than if commercial providers are used.

Large Conference Room Video Conferencing capabilities (operating on three ISDN lines) are rapidly expanding throughout the network of the 24 Local Health Departments. This real time audio and video interactive communication and learning tool is being used to connect regularly scheduled meetings of the Health Information Coordinating Council, HICC Workgroups, the Deputy Secretary for Public Health's Roundtable monthly meetings as well as for other regularly scheduled planning meetings such as Bio-Terrorism Preparedness. DHMH will continue to explore ways to provide video conferencing and video bridging services for the benefit of distant counties.

Live satellite broadcasting is also available at the DHMH site. This service provides Public Health employees with an excellent opportunity to view national live satellite broadcasts that are downlinked directly into the DHMH headquarters facility for either viewing or recording. The last and most rapidly developing area in Distance Learning opportunity is related to the learning capabilities on the Internet. The rate of change and innovation in this area is measured in months (not years – as in most other areas of change.) The trend to wireless connectivity has truly fueled a new way of working, communicating and learning that wasn't even on the horizon eight years ago. The impact of Public Health Distance Learning innovation is being felt throughout every level of this organization. As DHMH places increased value on becoming a Learning Organization, the value and importance of Public Health Distance Learning will be realized in every DHMH facility in the State.

4. Enhanced Services

DHMH provides value added services to make information resources useful to and usable by its customers:

5. Help Desk

The Technical Support Help Desk was established in order to provide DHMH computer users with one number to contact for technical support. The support areas provided includes, but is not limited to:

- Hardware and software installation, troubleshooting, & repair
- LAN/WAN administration, installation, & troubleshooting
- Mainframe and Midrange support

The Help Desk utilizes MAGIC TSD software by Network Associates, Inc. (NAI). This web-based software allows technical support staff to track service requests, generate work orders, perform remote control of the user's desktop for troubleshooting/repair, and, put in place reporting features for use by management. In the future, users will be able to Log a call with the Help Desk via Groupwise and also log a call and check status via the Web. The ultimate goal is to bring other administrations onboard as users of this system.

6. Virtual Private Networking

Information Technology Support Division offers Virtual Private networking to all administrations/units within DHMH utilizing the CISCO VPN solution. VPN access enables DHMH users to access network resources through a secure means to facilitate tele-working as well as enabling DHMH users to access network resources when traveling.

ITSD utilizes the CISCO VPN 3000 Series Concentrator and CRYPTOCard KT-1 authentication tokens for our VPN solution.

7. Video Conferencing Across the Wide Area Network (WAN)

Information Technology Support Division enables the use of the DHMH WAN for video conferencing between DHMH Headquarters and the 24 Local Health Departments in Maryland. By providing video conferencing across the WAN DHMH saves money by eliminating the need for costly ISDN telecommunications circuits at each site. Such ISDN circuits generate both monthly fees as well as per minute usage charges. By utilizing the increased bandwidth made available to DHMH via networkMaryand Layer 2 services as well as frame relay tail circuits which were already in place at remote sites, the ISDN circuits can be disconnected.

DHMH utilizes the CISCO IP/VC 3540 Concentrator for its' video conferencing solution. Remote sites utilize PolyCom video conferencing units with TCP/IP capability.

8. Information Security Protection for eGovernment Services

DHMH has a set of comprehensive information protection policies and procedures in place, and requires all personnel to abide by these directives. As part of those requirements to meet our Departmental Goal and the operational needs for the confidentiality, integrity, and availability of information resources we have classified information into three distinct types, and have directed that reasonably commensurate levels of protection be provided for these valuable resources. This protection is based on respective risks and consequences of disclosure.

(1) **Public Information** - Information in the public domain with no federal, state, or proprietary restrictions on its use or disclosure;
(2) **Proprietary Information** - Information having competitive or intrinsic value in ownership, that is protected under federal or state laws or regulations or by contractual obligations, or information, although designated as public, that may be restricted by method of access or level of detail and not provided unless requested for legitimate business reasons;
(3) **Protected Information** - as defined in federal laws and regulations (e.g. HIPAA), and in Maryland law and regulation- Includes personally identifiable/linkable information that requires the highest level of protection.

The Department currently provides information security protection as described below for these classes of information based upon type and reasonably commensurate with the risk of disclosure.

Protection of Public Information: Public information is protected to assure the integrity of the information by keeping this information from accidental or intentional manipulation or change.

We also assure the availability of the information by keeping it reasonably safe from denials of service attacks or other attempts to deny access to the information when needed. Public information maintained outside Department firewalls is protected by (1) acceptable firewall technology equal to or better than the Department or state standard, (2) continuous software upgrades to server operating and application software, (3) the limitation of unnecessary internet services on the servers, (4) adequate, restorable backups, onsite and off-site, (5) physical and environmental security for server location and backup sites, (6) and strict adherence to Department and state mandated security procedures.

Protection of Proprietary Information: Proprietary information has the same integrity and availability protection as public information, with additional care to assure confidentiality. In addition to the preceding protective standards for Public information, proprietary information is further protected by identifying and permitting appropriate users to access information limited by access control passwords and user identity.

Protection of Protected Information: Protected information requires the highest level of protection to assure continued confidentiality, integrity, and availability of the resources. Such protection includes all of the above approaches and additionally requires: (1) two-part or strong identification using a password and a token or smart card, (2) a digital certificate on a smart card or other removable media, or on the hard drive, (3) the use of a digital signature process using the preceding resources, (4) the use of Lightweight Directory Access Protocol (x.509) for management of these resources, (5) encrypted transmission using Secure Socket Layers technology and/or the use of a Virtual Private Network, and (6) the installation of administrative procedures that support these resources.

DATA SYSTEMS

DHMH operates several hundred data systems in programs throughout the Department. An inventory is attached at Appendix 1.

SECTION FIVE: DHMH INFORMATION TECHNOLOGY POLICIES

Policy No.	Title
02.01.01	Policy on the Use of DHMH Electronic Information Systems (EIS)
02.01.02	Policy on the Use and Copying of Software and the Prevention of Computer Software Copyright Infringement
02.01.03	Policy on the Acquisition and Utilization of Information Technology Resources
02.01.04	*System Life Cycle Management *
02.01.05	HICC Policy
02.01.06	Information Assurance Policy (IAP)

* The *DHMH Systems Development Life Cycle (SDLC) Policy* has been superseded by the DBM SDLC Policy.

All other DHMH Information Technology Policies may be viewed at:

 DHMH Policies

http://www.dhmh.state.md.us/policies/op02.htm

APPENDICES

1. DHMH Data Systems Inventory

2. DHMH Software Standards

3. DHMH Hardware Standards

4. DHMH IT Positions (hard copy)

5. DHMH Telecommunications Plan (hard copy)

6. DHMH Computer Equipment Inventory (hard copy)